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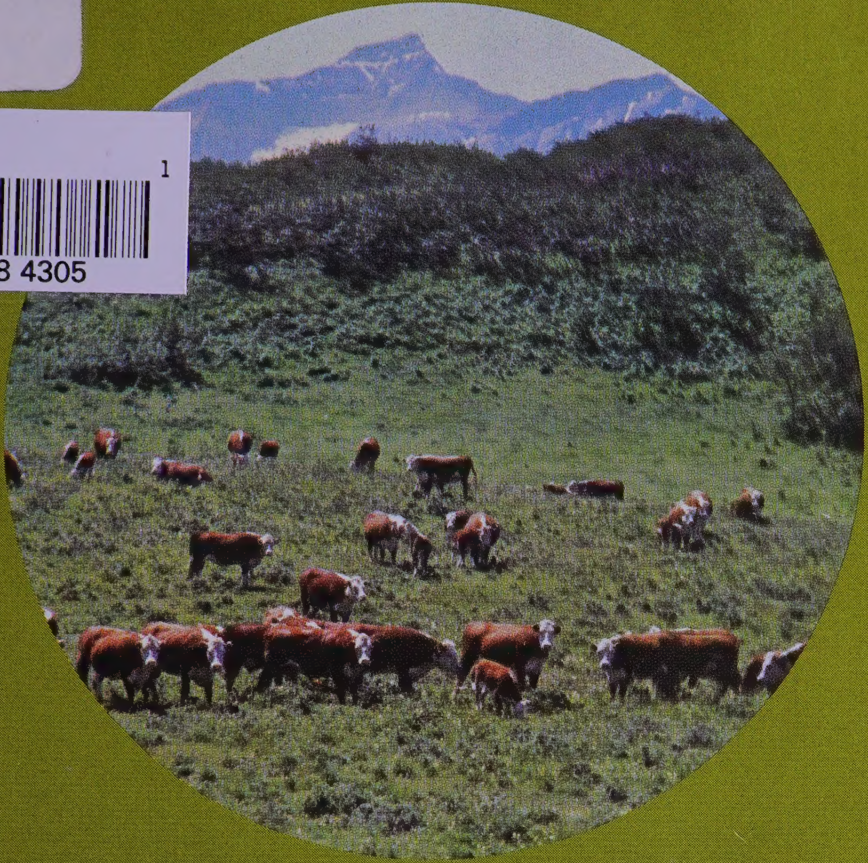

AGRICULTURE in ALBERTA

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Foreword

The first edition of this pamphlet was prepared primarily for the benefit of prospective immigrants to Alberta. Large scale immigration to homesteads is now a thing of the past. There is however a steady demand for basic information on Alberta's agriculture, much of it from our grade schools. It is important that our predominantly urban oriented youth be provided with basic, up to date, information on agriculture in Alberta, and to them this new edition is dedicated.

H. A. RUSTE,
Minister of Agriculture

E. E. BALLANTYNE,
Deputy Minister

[1970]

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Alberta's Agriculture is Livestock Oriented

Agriculture in Alberta has kept pace with the progress experienced by other industries and in many cases more so. Just now, the wheat oriented western agriculture is going through trying times, but since World War II, Alberta's farmers have increasingly followed a path of diversification and fewer adjustments are required. Over 50 percent of the province's cash farm receipts now come from livestock and livestock products. Especially significant has been the development in the Cattle Industry. Farm cash income from the sale of cattle rose from 10.6% prior to World War II to 33.2% in 1968. Alberta is first among Canadian Provinces in the production of beef cattle and sheep, second in swine and third in dairy and poultry. It produces 30% of Canada's red meat.

Other developments of special interest are: the spectacular rise in the acreage of oil seed crops from 23,000 acres in the Thirties to 8,830,000 acres in 1968, mostly rape, a seven fold increase in land devoted to tame hay and a two fold increase in coarse grains.

Along with diversification, agriculture has experienced a tremendous increase in the rate of production per unit, thanks to greatly improved technology, particularly in the fields of fertilizers, pesticides, nutrition and breeding. Yet all this has come in spite of a 2/3 reduction of the farm labor force. Finally, crop insurance and new marketing legislation have been introduced, both intended at giving added stability to the farming industry.

In recent years, agriculture lost to mining its first place in the net value of production. Its impact on the economy however is still top because of all the jobs it creates in the manufacturing industry: meat packing, dairy processing, food and beverage, flour milling, feed manufacturing, fruit and vegetable canning and processing, oil seeds processing.

Evolution of Agriculture in Alberta

	1936	1966
Farm population	400,390	281,583
% farms to total population	51.8	19.2
Number of farms	89,550	69,411

	1936	1966
	(thousands)	
Total area in farms	40,540	48,983
Total area improved	18,363	27,276
Percent improved	45.4	55.7
Area per farm (acres)	453	706
Tons fertilizer used	4,500	316,116

Crop and Livestock Production

	1931-40	1961-66	1968*		1931-40	1961-66	1968*	
CROPS	**Average Yearly Acreage**				**Average Yearly Production**			
Wheat	7,943,000	6,070,000	6,460,000	Acres	125,344,000	138,800,000	166,000,000	Bushels
Coarse Grains	3,914,000	6,110,000	7,084,000	”	107,711,000	229,492,000	288,700,000	”
Oil Seeds	23,000	821,000	883,000	”	176,000	11,325,000	14,016,000	”
Root Crops	47,000	62,000	63,000	”	301,361	683,800	610,000	Tons
Vegetables			2,130	”				
Forage Seeds					3,348,800	37,707,000	35,200,000	Lbs.
Tame Hay	400,000	2,693,000	2,740,000	”	630,000	4,156,000	3,200,000	Tons
Others								
LIVESTOCK	**Average Yearly Number**				**Units Marketed**			
Cattle and Calves	1,428,000	3,174,000	3,322,000	Head	258,823	960,200	1,145,000	Head
Hogs	973,000	1,222,000	1,245,000	”	1,000,436	1,528,700	1,813,000	”
Sheep	744,000	409,000	245,000	”	189,500	164,800	97,000	”
Hens, Chicken	8,772,000	8,327,000	9,145,000	”	5,000,000	13,276,000	13,750,000	”
Bees	12,059	84,666	110,000	Colonies	5,418,000	11,849,000	10,230,000	Lbs.
Eggs					25,000,000	37,000,000	39,189,000	Dozens

* Estimate

33.2% of Alberta's farm cash income comes from sales of cattle (calves included)

Evolution of Agriculture in Alberta

FARM CASH RECEIPTS **

	in Dollars		in % of Total Receipts		
	1961-66	1968 *	1931-40	1961-66	1968 *
CROPS					
Wheat	179,300,000	233,067,000	54.2	29.2	29.2
Coarse grains	54,000,000	89,865,000	4.7	8.8	11.3
Oil Seeds	20,200,000	20,143,000	0.1	3.3	2.5
Root crops	12,600,000	12,804,000	1.5	2.1	1.7
Vegetables	1,900,000	2,197,000	2.5	3.7	1.9
Forage seeds	5,835,000	4,620,000			
Others	15,097,000	13,398,000			
Total crops	289,032,000	371,474,000	63.0	47.1	46.6
LIVESTOCK					
Cattle	173,000,000	264,456,000	10.6	28.3	33.2
Hogs	70,200,000	78,307,000	14.0	11.5	9.8
Sheep	3,033,000	2,740,000	1.0	0.5	0.3
Hens, chickens	16,100,000	17,529,000	1.3	2.6	2.2
Bees	1,800,000				
Eggs	10,667,000	11,808,000	1.3	1.7	1.5
Dairy products	41,000,000	43,133,000	7.1	6.7	5.4
Other	7,700,000	7,242,000	1.7	1.3	1.0
Total livestock	323,500,000	425,215,000	37.0	52.9	53.4
	612,532,000	796,689,000			

** Deficiency payments and P.F.A.A. not included.

* Estimates.

Geography

The Province of Alberta lies east of the Canadian Rocky Mountains, between the provinces of Saskatchewan and British Columbia. Its southern boundary is the 49th parallel of latitude which passes south of the English channel, through France a few miles north of Paris. Similarly, its northern boundary, the 60th parallel of latitude, passes through the southern parts of Norway and Sweden.

Alberta comprises 248,000 square miles of land, approximately half of which is forest, mainly in the North and along the Eastern slope of the Rocky Mountains. The remainder is farm land varying from wooded and semi wooded country to bald prairie in the South East.

The area of the Province is equivalent to three times that of England, Scotland, and Wales.

The Province is divided into townships which are six miles square and are numbered consecutively as they run north from the international boundary (Townships) and westward from the Meridians (Ranges). Townships are divided into 36 "sections" (numbered from 1 to 36), each one square mile (640 acres) in extent, with a road allowance 66 feet wide around each two sections. A section is further divided into four quarter-sections of 160 acres each. By learning the quarter-section, the number of the section, township and range, the location of any piece of land in the Province can be readily determined.

It is estimated that some 68 million acres of land in Alberta are suitable for agricultural purposes. About 40 million acres are considered fair to good arable. According to the 1966 census, 48,982,875 acres are in farms while 27,276,251 acres are improved.

Climate

In Alberta, the severe continental climate prevailing in the interior of North America is modified by the frequent occurrence of warm "chinook" winds, that blow in from the Pacific Ocean. These winds are fresh and balmy having been dried on the westerly slopes of the mountains and then warmed by pressure as they descend into Alberta. "Chinooks" are a marked characteristic of winter in the ranching areas of the south; but they raise the temperature to some extent in every part of the Province.

The length of the growing season limits the range of crops that can be successfully grown in Alberta. The mean frost-free period becomes shorter Northward and Westward from Medicine Hat, but the Peace River country enjoys a somewhat longer frost-free period than the surrounding area.

When considering the length of the frost-free period, one should also look at the latitude one is to farm. The further North, the longer are summer days and the more active is plant growth.

In the hottest part of Southern Alberta, the temperature on a midsummer day may rise from 55 degrees at sunrise to 85 degrees in the afternoon. In the Edmonton region, 50 to 70 degrees is the average range. Very high temperature (90 to 100 degrees) occur at times in the southern prairie region, and seldom in the north. With rare exceptions, nights are cool.

Generally speaking, precipitation is a limiting factor to crop production. The fact however, that the growing season is the period of greatest rainfall, permits the efficient use of a high proportion of the total received.

Rainfall is variable from year to year. Except in the irrigated areas, failure of summer rains is a serious matter to the grain farmer and results in feed shortages among ranchers who do not carry a substantial reserve on hand.

In general, evaporation is highest in the south of the Province because of higher temperatures and greater wind velocity in that region.

In all parts of Alberta there is risk of crop damage from hail. It is estimated that the average loss on acreage insured since 1919 was about 7 percent. The incidence of damage varies greatly between districts and insurance rates are based on local experience.

Types of Agriculture by Soil-Climatic Zones

(See map, page 11)

Alberta soils are glacial in origin. The result is that there is considerable variation in basic soil materials laid down by ice action. With some exception, uniformity in soil conditions even within relatively short distances cannot be depended upon. Nevertheless, there are four fairly well defined soil zones in Alberta: brown, dark brown, black and grey wooded. The boundaries between the soil zones are not distinct. Generally speaking there is an imperceptible change in climatic and soil conditions as one proceeds in a northern and western direction within the Province.

A characteristic type of agriculture has developed in each soil climatic zone. In addition a distinct agricultural area has been added in the south through the development of irrigation.

THE BROWN SOILS: The brown soils zone is semi-arid prairie. It occupies 12.5 million acres. Two million acres are classed as fair to good arable land and 4 million as poor to fair arable. Over 7 million acres are in occupied farms, with about 3 million under cultivation.

The average annual precipitation in the brown soils zone varies from 11 inches between Brooks and Medicine Hat to 14 inches in the north. Although most of the rainfall comes during the growing season, the lack of moisture is a seriously limiting factor to production in about one-half the years. Yield variability is high.

The growing period in the south of this zone is the longest in the Province, averaging over 120 days in the Brooks area, just Northwest of Medicine Hat. This factor is most important and permits the production of a wide range of crops under irrigation.

Regular rotations of grain and forage are rarely followed in this area. It is either wheat-fallow or wheat-wheat-fallow. Good tilth is maintained by incorporating all crop residue in the soil. When tame forage is needed, the choice is generally restricted to crested wheat grass and Ruman wild rye, both of which are drought resistant.

The raising of cattle and sheep on the short-grass range lands which are unsuitable for cultivation has always been important. While the carrying capacity of these lands is relatively low. (30 acres are required to graze one head of cattle six months each year) the nutritive value of the grasses they produce is unexcelled. Of late, the capacity of range land, not only in the brown soils but in others has been considerably increased by reseeding suitable areas to tame grasses, and by brush control with chemicals.

THE DARK-BROWN SOILS: The dark-brown soil zone consists of nearly 16 million acres which were originally grasslands dotted with small tree clumps. Approximately 9 million acres are classed as fair to good arable land, while another 1½ million acres are considered poor to fair arable.

There are approximately 14 million acres occupied and 7 million cultivated. About 2 million acres of fair to good arable land in this zone are not yet cultivated. The percentage of range and waste land is much smaller than in the brown soils zone and the arable land occurs in larger blocks.

Most of the dark-brown soils receive an average of 14 to 15 inches of precipitation annually. Except in local areas with light, sandy soils, this is sufficient to permit the introduction of permanent farming systems based on crop rotations including grasses and legumes. The lighter soils are not suitable for cultivation.

Temperatures and the length of the growing season vary a great deal in this zone. Aided by irrigation a great variety of canning and specialty crops—corn, sugar beets and other vegetables is grown. Proceeding northward, the growing season gradually shortens. In the northeastern portion, between Coronation and Vermilion, the frost-free period is reduced to an average of about 100 days.

In this region the number of crops that can be grown are limited. The incidence of frost damage in the production of common cereals which are the main crop, is not uncommon.

The most extensive wheat growing regions in the Province are in the dark-brown soils zone. Normally three-quarters of the area seeded to cereals is devoted to wheat production, and the quality produced is good. The usual rotation is wheat-wheat fallow but in the north, coarse grains are frequently substituted as second or third crop after fallow.

There are a considerable number of range cattle and some range sheep raised in the southern part of the dark-brown soils zone. Mixed farming, with beef cattle as the main variation, is more prevalent in the north and on the western boundaries. The tendency now is to extend the use of alfalfa-grass mixtures for hay as a basis for diversification where rainfall permits.

The amount of grass, particularly brome, produced for seed in the dark-brown soils zone has increased in recent years.

THE BLACK SOILS: The black soils are the most productive soils in Alberta. The region they occupy is generally referred as the "parkland" country. It contains about 10 million acres of which 7.5 million are fair to good arable land. About 9.5 million acres are occupied, and 5.5 million are under cultivation.

Most if not all, of the arable land in this zone is occupied.

Most of the area lies in the 17 to 18 inch precipitation zone. This is the highest for the Province. Nevertheless while serious drought rarely occurs, moisture is not infrequently a limiting factor in crop production.

A diversified system of agriculture is highly developed on the black soils. Coarse grain, grasses and legumes, all do well and form the basis of an expanding livestock industry. Most of the bacon exported from Alberta originates in this soil zone and returns from dairying are estimated to approximate returns from beef cattle. There is a tendency on the part of farmers to substitute longer rotations, which include grass and legume crops, in place of the grain-fallow rotation practiced formerly.

Fairly good quality wheat is grown on the black soils adjacent to the dark-brown soils. The quality is somewhat low in other parts, and the production of wheat should not be emphasized. In recent years there has been a definite shift to coarse grains. Most of the malting barley produced in Alberta is grown in the black soil zone.

THE GREY-WOODED SOILS: The grey-wooded soils zone contains most of the undeveloped agricultural lands in the Province including the Peace River transition soils. The zone comprises about 110 million acres, but, it may remain relatively undeveloped for many years owing to inaccessibility, heavy tree cover and soils of low-fertility. The total area occupied or available for settlement is estimated at 25 million acres, of which 15 million might be arable. Only 10 million acres are occupied at present with 3 million acres under cultivation.

Precipitation in the central portion of the grey-wooded soils zone, averages from 17 to 19 inches. The amount received decreases to the north, the average at Fort Vermilion being about 13 inches. Owing to a relatively low rate of evaporation, a high proportion of the moisture received is available for crop production.

Shortness of the growing season definitely limits the type of agriculture that can be successfully practiced on the wooded soils. In small areas the average frost free period is 110 days, but a major portion of the zone averages 100 days or less with some parts under 75 days. The growing season becomes rapidly shorter toward the mountains and slowly shorter toward the north.

Excepting for small pockets of better than average soil, wheat should not be grown in the grey soil zone excepting for feed because of its usually poor milling and baking quality. Why grow wheat anyway in an area where coarse grains, rape and forage crops do well when properly fertilized and in the right combination from one another.

Most forage crops are grown for hay and pasture to sustain a vigorous and steadily increasing livestock economy, but there is most years an attractive market for substantial quantities of forage seed: alfalfa, alsike, altaswede, sweet clover, and special to the Peace River, creeping redfescue.

Generally speaking, crop rotations should include forty to sixty percent forage crops, especially legumes. Fertilizers are a must. The amount and kind is best determined by farmers sending soil samples for analysis to the Soils and Feed Laboratory in the O.S. Longman Building. (See picture and text page 14).

Irrigation

Alberta is advantageously situated with respect to a supply of water for irrigation. The semi-arid part of the Province is traversed by the six largest tributaries of the South Saskatchewan River; and the topography of the region makes possible the construction of storage reservoirs at relatively low cost.

Moreover, the streams are fed by snow melt and mountain glaciers that provide water in quantity during the summer months when irrigation is in progress.

There are now fourteen major irrigation projects in operation with some 725,000 acres of land now being irrigated. The total potential irrigable area in the province, including privately owned projects is estimated at nearly two million acres.

In the irrigated areas there are four main types of farms: grain, sugar beets, specialty crops and mixed farming. Grain acreage is highest in districts with no facilities for handling specialty crops. Sugar beet production is centered at Picture Butte and Taber. Canning crops are processed at Taber, Lethbridge and Magrath. An extensive livestock and forage economy is carried on throughout the irrigated areas.

Soil salinity and drainage problems are one side effect as a result of irrigation. However, government agrologists and Engineers are involved with programs to assist farmers and irrigation districts with safe disposal of surplus drain water and efficient irrigation practices.

In recent years, very many innovations have been developed. A great deal of farms resort to sprinkle irrigation systems - many of which are automated to save both water and labour. There has been considerable development in all phases of the potato industry including export markets. The fresh vegetable and the canning industries look to the future with increased confidence.

How a Farm may be Acquired

There are several ways of getting a start on a farm in Alberta. One may purchase or lease an established farm, but many young farmers acquire their farms through family transfers. Whichever method is decided upon, care should be taken to settle in a district and on land which is adapted to the kind of farming one wants to undertake. The suitability of the farm acquired will in large measure determine success of the enterprise.

If one possesses the necessary funds, he may purchase a farm in any part of the province. The terms of the sale vary, but at least one-third, preferably two-thirds of the purchase price is usually required to be paid at the time of purchase. Frequently, the balance owing with interest is made payable on a crop share basis. This share is generally one-third of the grain produced,

Land clearing and breaking—grey soil zone

delivered at the local market. Such an arrangement provides protection in the case of poor crops or low prices. When a mortgage is given to secure money for purchase, repayment is required in fixed annual amounts.

A relatively small number of Alberta farmers rent all the land they occupy and this form of tenure will continue to be used as a means of getting started in farming. On grain farms, the landlord maintains his real estate by paying for building and fencing repairs, fire insurance and taxes, and receives one-quarter to one-third of the crop delivered at the market depending on the grade of land. Should he provide part of the equipment, feed, seed, etc., the landlord's share is proportionately greater. In mixed farming areas, there is a tendency to enter into agreements that divide returns from livestock enterprises as well as grain growing. To be successful each party to a livestock share rental agreement must be well acquainted with and have the confidence of the other party.

A Canadian citizen, a British subject or a person who declares his intention to become a naturalized citizen and who has resided in Alberta for a total of twelve months within the immediately preceding three years may make an application for a homestead sale to increase his holdings to a maximum of 640 acres. The purchase price of the land is determined by inspection and is payable over a ten to twenty year period. Certain exemptions for payment of interest and principal are granted and the sale contract is a conditional agreement requiring the completion of breaking and cultivation duties and also residence duties. Title is issued on satisfactory completion of the duties required and the payment of the purchase price.

Due to the over production of grains and the apparent necessity for the reduction of the acreage used for grain production it is not expected that new lands will be made available for disposition in the near future.

To assist in meeting the needs of the new situation in agriculture, Farm Adjustment Committees have been established at strategic points to act in an advisory capacity to the Department in the disposition of crown lands. All applications for land will be reviewed by the local Farm Adjustment Committee and will be considered on merit. Consideration will be given to the needs of the community for recreation, preservation and conservation of fish and wildlife, forest use and water resources, as well as the development of the agricultural economy.

It will be the responsibility of the Farm Adjustment Committee to make recommendations for the disposition of the lands seriously considering the enlargement of already established holdings and the formation of more viable economic units. The movement of new settlers to fringe areas is at present not encouraged.

Farm Credit Facilities

In Canada the Provinces have jurisdiction over property and civil rights. In keeping with its responsibility in this connection, the Alberta Government has made provision by legislation for the registration of securities, the rights of creditors and borrowers and the procedure to be followed in the repayment of debts.

Short-Term Credit: Many Alberta farmers are engaged in grain growing and livestock operations on a large scale. To carry on their businesses successfully they require access to short term or seasonal credit. The Provincial Treasury branches and the chartered banks provide most of this type of credit. Security is taken on livestock, threshed grain, grain storage tickets, or other highly liquid collateral. Money advanced for the purchase of seed, and the cost of threshing becomes a first charge upon the crop grown or harvested therewith. Financial assistance is made available through the Alberta Feeder Associations' Guarantee Act, to help feeders finance the purchase of cattle and lambs for finishing.

In recent years, because of low quotas of grain deliveries, provision was made by the Federal Government to assure loans to farmers on stored grain at no interest.

Intermediate Term Credit: The sale of farm machinery, equipment, lumber and livestock on terms has in effect, provided farmers with considerable intermediate term credit. Usually a cash payment is made at the time of purchase with the balance secured by lien agreement. Chattel mortgages are extensively used when additional security is required.

The Farm Improvement Loans Act proclaimed by the Government of Canada on March 1, 1945, provides for intermediate credit to farmers for the improvement and development of living conditions thereon. Farm improvement loans are made by charter banks which are guaranteed against loss by the Federal Government up to ten percent of the aggregate principal amount. Repayments are arranged on the instalment plan.

Money may be secured under the Act for (1) the purchase of farm implements, machinery and trucks; (2) farm home building, repair, improvement and alteration; (3) for the purchase of livestock; and (4) for the clearing and breaking of land.

Long-Term Mortgage Credit: The principal sources of farm mortgage funds in Alberta are the Canadian Farm Credit Corporation and the Alberta Farm Purchase Board.

The Canadian Farm Credit Corporation is a self governing crown corporation. It may approve first-mortgage loans not to exceed $40,000 or 75 percent of the appraised productive value of the farm. Loans are to be used to acquire farm land, fertilizers, seed, equipment, and livestock; to improve the mortgaged farm land; to discharge liabilities; or for any other purpose necessary for the efficient operation of an economic farm unit. The corporation may also approve supervised loans in amounts up to $55,000 secured by farm land and chattels. There is also provision for loans to partnerships. These must not exceed $40,000 per qualified individual ($55,000 for supervised loans) to a maximum of 100,000 dollars.

Interest rates for all types of loans are set by order in council to keep it in line with Bank of Canada rates. Terms must not exceed 30 years, however, crop share arrangements are available to borrowers in areas where the production of grain crops for cash is the general pattern of farming.

The Alberta Farm Purchase Credit Act and regulations thereunder are intended to (1) assist young men to become farmers: (2) facilitate father to son transfers, and (3) encourage the development of economic farm units.

Applicants for loans must have resided in Alberta for three out of the last five years; be Canadian citizens or British subjects between the ages of 21 and 55 years of age; have a minimum of three years farming experience and are or intend to become bona fide farmers; and have or can acquire the livestock and equipment necessary to establish a successful farm. Credit is provided only for the purchase of land. The value of the land owned and/or to be purchased must not exceed $50,000.

The Farm Purchase Board will loan 80 per cent of the price of the land to be purchased or a maximum of $24,000. The borrower must make a down payment of not less than 20 percent (unless waived by the vendor as may be the case in a father-son transaction).

District Farm Purchase Advisory Committees receive and process applications for loans and otherwise serve purchaser and vendor. However, loans accepted by a local committee must be approved by the provincial board. Loans are repayable in 20 annual installments provided payments do not extend beyond the borrower's 66th birthday. The interest rate of 7 per cent includes life insurance in the amount of the liability outstanding.

Farm Mechanization

(See pictures page 10)

Farm equipment represents a substantial part of the capital invested by farmers and the value of equipment has gone up considerably in recent years. This is due partly to inflation but also to a considerable degree to the need for greater efficiency of production especially cost wise. Between 1961 and 1966, the average value of machinery and equipment per commercial farm increased 41.4% with not quite one third of this increase due to inflation. The 1966 value per farm was $14,356, for an Alberta total of 703 million dollars.

A comprehensive government policy in regard to rural electrification has assisted development. This policy is based on giving assistance, by direct loan and loan guarantees, to farm electrical cooperative associations organized to distribute electricity in rural communities.

Marketing Legislation

Marketing is the complement of production and over the years producers have become increasingly concerned about marketing, in particular with

Combine at work

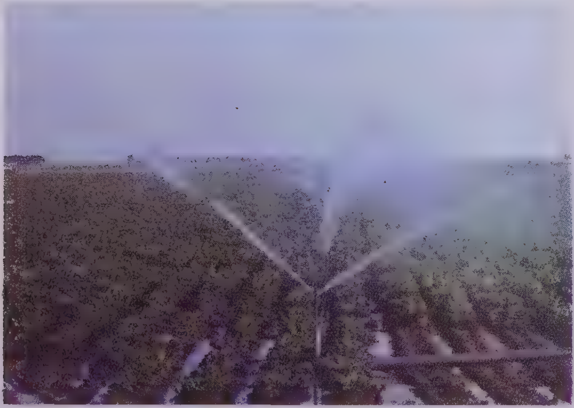
Corn harvesting for silage

Swathing forage

Mechanical drill filling

Swathing barley

Semi-open hog feeder


Sprinkle irrigation

Wagon loading bunk feeding

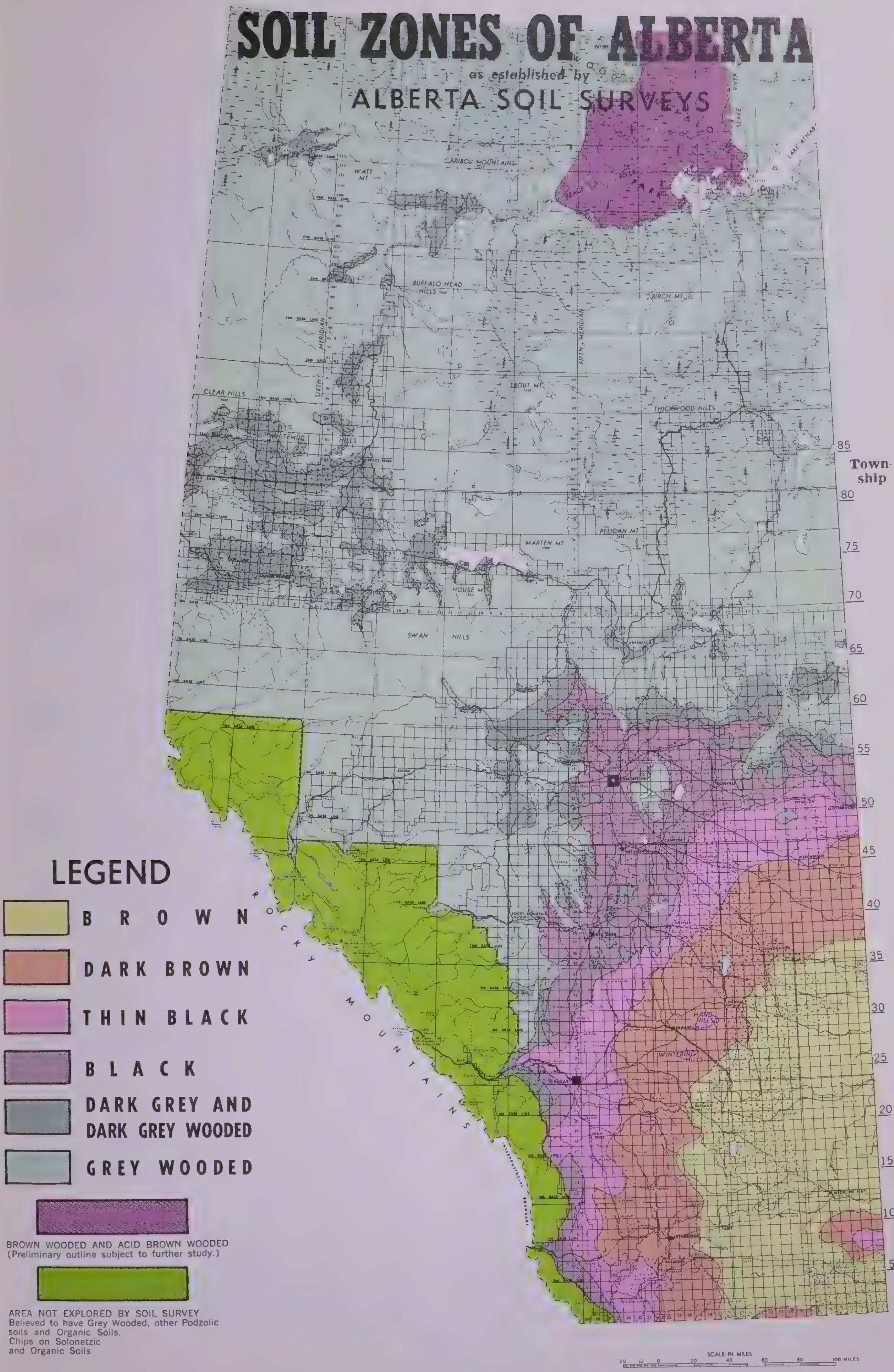


Figure 1—Soil zones of Alberta

the manner in which prices are determined for their produce. For this, and other reasons, the Alberta Marketing of Agricultural Products Act (1955) was amended to a considerable extent at the 1965 session of the Legislature. Whereas provision had previously been made for the establishment of producer marketing boards, amendments to the Act provided for the addition of marketing commissions, an Agricultural Products Marketing Council, as well as for Industry Advisory Committees.

Producer marketing boards are the legally constituted means for collective bargaining. The powers that may be extended to a board range from those of negotiation of producer prices and terms of contract, to complete control of the product and selling it through a designated agency with or without the use of marketing quotas. Owing to the range of powers that a board may use, producers must vote in favor of a plan to establish a board. Marketing boards are composed of producers and elected by producers.

Marketing commissions may be established solely for the promotion, advertising and conducting of research for a commodity; or commissions may be set up to provide for an agency through which producers may sell their product on a voluntary basis. Marketing quotas are not permissible. If there is no strong opposition toward a plan for a marketing commission it may be implemented without a vote. Marketing commissions consist of producers and industry representatives who are appointed by the Lieutenant Governor in Council.

The Agricultural Products Marketing Council was established July 1, 1965 for the purpose of administering the Alberta Marketing of Agricultural Products Act. It is the function of the Marketing Council:

— to receive and analyze requests from groups of producers seeking to establish a marketing plan, which may be for a board or a commission;

— to aid in the development of plans and regulations with producers;

— to hold hearings and conduct plebiscites if necessary;

— to supervise the operation of boards and marketing commissions; and

— to advise the Minister of Agriculture on all matters relating to the establishment, operation and control of boards and commissions.

The composition of the five men Marketing Council was designed to bring together persons with a wide range of knowledge and experience. Three were civil servants, while one other member was appointed to represent producers and one to represent industry.

At present the following boards and commissions have been established under the Marketing Act:

1. Alberta Broiler Growers' Marketing Board, whose primary function is to set prices and allot marketing quotas.

2. Alberta Turkey Growers' Marketing Board, which sets prices to be paid producers and allots marketing quotas.

3. Alberta Egg and Fowl Marketing Board, which sets prices to be paid producers and allots marketing quotas for eggs used for human consumption.

4. Alberta Hog Producers' Marketing Board, which offers by means of a teletype mechanism all market hogs to the packer buyers. Marketing quotas are not used.

5. Alberta Vegetable Marketing Board, which sets prices to be paid producers after negotiation with processors.

6. Alberta Potato Commission which is for the promotion and advertising of potatoes, as well as for research into problems affecting the potato industry.

7. Alberta Cattle Commission which at present is primarily for research into problems relating to the marketing of cattle.

Note: Each of the above boards is guided by the views of Industry Advisory Committees comprised of all segments of the industry (i.e. processors, hatcherymen, feed dealers, and producers.)

The financing of the operation of the boards and commissions is by means of a levy on the product sold by producers.

As an overall statement, it can be stated that while there have been some difficulties in the function of the above mentioned boards and commissions, that producers in general are satisfied with their performance.

Governments' Special Services to Agriculture

Under the British North America Act, the federal and provincial governments in Canada have definite responsibilities with regard to the development of agriculture. With respect to some features of the work either government may take action. In practice, services to agriculture have been developed between the two governments on a complementary basis.

In general, the government of Canada is regarded as the senior partner in the field of marketing, the grading of farm produce, and agricultural research. The provinces are responsible for agricultural education, extension, production and the organization of farmers' activities, including cooperatives.

Municipal governments are principally charged with enforcement of laws dealing with soil conservation, weed and pest control, To an increasing degree they are being encouraged to take active part in the designing and implementation of all embracing long and short term agricultural programs for the area under their jurisdiction.

Canada Government: The Canada Dept. of Agriculture is composed of 3 Divisions. 1) Economics, 2) Production, Marketing and Health of Animals, 3) Research.

Operating under special Act Administrations are the Board of Grain Commissioners, the Prairie Farm Assistance Act. The Farm Credit Corporation is a Crown Agency. These are directly responsible to the Federal Minister of Agriculture.

The services offered through the department are available to the provinces through branch offices. The organization of regional agricultural research stations in Alberta is an example. The station at Lethbridge, with an irrigation substation at Vauxhall and range substations at Stavely and Manyberries is devoted mainly toward the solution of problems related to irrigation; dryland agriculture; specialization in wheat production; the production of horticultural crops; and cattle ranching. The experimental farm at Lacombe is in a mixed farming district. Consequently, the research program is designed to expand knowledge in relation to animal breeding and the production of livestock feed. The Lacombe breed of hog, a cross between the Yorkshire and Landrace, originated here. The problems of production on solonetzic soils are studied at the Vegreville substation. At Manyberries a program of animal breeding and pasture investigation is carried out under range conditions, while agriculture in the Peace River District and in the Territories is under investigation from the Research Centre at Beaverlodge and its substations.

The production and marketing branch administers legislation and policies related to agricultural production, marketing, (including the setting up and enforcement of grade standards) and animal and plant disease control. The markets information sections is responsible for compiling and making available data regarding the quantities marketed, grades and prices received for farm commodities.

The chief function of the consumer section is to assist in developing the consumer market for the products of Canadian Agriculture. The retail inspection unit is responsible for inspecting agricultural products in retail stores for compliance with prescribed grade standards. The head of the branch is also chairman of the Agricultural (prices) Stabilization Board.

The Economics Division of the administration branch collects, analyzes and interprets economics information required in the formulation and administration of departmental policies and programs. It conducts economic research with a view to increasing efficiency in agricultural production and marketing and the improvement of farm living conditions.

Provision for the development of low income areas rests mostly with the Department of Regional Expansion which, under the Regional Development Incentive Act, also administers P.F.R.A., A.R.D.A., and New Start. The Prairie Farm Rehabilitation Act provides a continuous program of investigations primarily for the conservation and the development of available water resources and land use. The Agricultural Rehabilitation and Development Act program provides for federal-provincial agreements respecting land use adjustments in low productivity areas with special emphasis on the development of resources for treaty Indians and Metis.

Alberta Dept. of Agriculture

(see chart page 19 and map page 20)

The Alberta Dept. of Agriculture serves the rural people through seven divisions, each concerned with a particular phase of the industry. The respective Divisions deal with plant industry, animal industry, water resources, extension and colleges, program development, agricultural economics and veterinary services. Each in turn is divided into Branches. For instance, the animal industry division has 3 branches; Livestock, Poultry, and Dairy.

Dairy Cattle Judging Practice

For administration purposes the province is divided in seven regions and each region includes a number of District offices. Each Regional Office is supervised by a Regional Agriculturist whose main functions are: regional planning, coordination of regional specialists and supervision of District Agriculturists in their region.

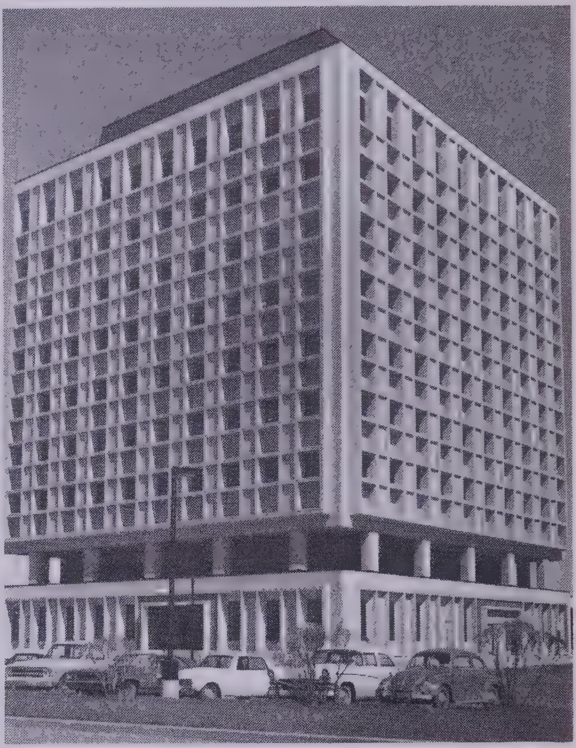
District Agriculturists and District Home Economists are educators, (see page 17), administrators, and public relations officers for the Dept. of Agriculture. An important function is the coordination of all forces working for the good of agriculture in the District. Formulation and implementation of the soundest possible program for orderly development of rural affairs in the District is the goal.

Modern Laboratory facilities and specialized service are provided by the Consolidated Laboratory in the O.S. Longman Building in Edmonton. The sections concerning agriculture are:

Crop clinic
Soil and feed testing
Toxicology
Home Economics
Dairy and Food
Veterinary
Soil Mechanics

At Brooks the Department has a Horticultural station where extensive research on production and storage is undertaken especially with vegetables.

A tree nursery close to Edmonton provides trees for farms also to the Department of Lands and Forests for reforestation.



O. S. Longman Laboratory Building

Local Government

MUNICIPAL ADMINISTRATION:

Farm communities in Alberta enjoy self-government in all matters of local interest. The only exception is in outlying districts which are not sufficiently advanced to support self government and where local affairs are administered by officers of the Department of Municipal Affairs.

Rural municipal districts and counties are the principal units of local self government. There are 17 municipal districts and 31 counties now organized are made up of from five to eleven councillors, depending upon the size of the municipality.

In counties, the county committee administers all matters within local jurisdiction of Council. In municipal Districts Council administers only roads, agriculture and matters of general interest while schools and hospitals are under the jurisdiction of independent Boards.

In counties, matters pertaining to Agriculture are dealt with by the Agricultural Committee, often on the advice of an agricultural advisory committee. In municipal districts matters on agriculture are usually dealt with by the "Agricultural Service Board" which has only a few of the privileges of the School Board.

Local authority to levy taxes is pretty well restricted to a direct tax on land. More than 90 percent of revenues collected by rural municipalities come from this source. However, benefits from other sources of revenue are extended to municipal districts and counties through a policy on the part of the Provincial Government in providing grants both for specific purposes and without condition.

Education

Rural Public Schools: The operation of public schools is an important function of local self-government. For the purpose of administration there are 29 school divisions and 31 counties in the Province. Each jurisdiction averages about 2500 pupils. Centralization of schools is practically completed. The majority of rural children are transported to school by bus. A typical rural educational centre would have 24 rooms and be fully up to date in most respects.

The affairs of a school division are administered by a board of trustees, three or five in number, each representing a sub-division and elected for a period of three years. The superintendent of schools for the division represents the Alberta Department of Education and serves the board in a consultative capacity. An office with a full time secretary-treasurer in charge is maintained by each division. In the counties that have been organized, an educational committee of council takes the place of the board of trustees in the administration of school matters. Also the secretary of the county council is responsible for directing the details of school operation.

Small centralized Public School

The board has control over the construction and maintenance of schools, teachers, residences, dormitories and other buildings, the employment of teachers, salaries, supplies, library services and determining the amount of money to be requisitioned for financing. The educational committee in the counties perform similar duties and have the same responsibility for preparing the budget for school operation. The elected members, being councillors sit on the council when the budget comes up for consideration.

University Faculty of Agriculture:

The University of Alberta serves the rural interests of the Province through a Faculty of Agriculture. The Faculty consists of eight departments namely, animal science, dairying, plant science, genetics, soils, agricultural engineering, entomology, agricultural economics, and farm management. A four-year course leading to the degree of B.Sc. in agriculture is offered and opportunity for post-graduate study is provided in most of the departments of Faculty.

The training of students is looked upon as the first duty of the staff. However, considerable time is devoted to research work and extension activities.

"Farm & Home" at work

Sewing bee

Demonstration in grey soil management

Field Day

The Faculty is the principal provincial research agency doing fundamental and applied research related to agriculture. Close contact with farm people is maintained through radio, the press and the publication of bulletins. Staff members address gatherings at meetings and field days throughout the province, and the public are invited to attend "special" days at the University when the results of the experimental projects are discussed.

For example, Feeders' Day arranged by the Department of Animal Science, attended annually by more than one thousand people from all parts of Alberta; the Annual Breton Field Day, and the Field Day at the Kinsella Ranch.

The departments of animal science, plant science, and soils operate farms as part of the experimental and research programs carried out. Thus a useful contact is established between laboratory research, experiments conducted in the field and the practice of farming. In addition, co-operative work is carried on with farmers and various organizations in many parts of the Province. Close co-operation is maintained with the National Research Council of Canada, Federal and Provincial Departments of Agriculture, and with a number of commercial and industrial organizations.

Agricultural and Vocational Colleges

The Alberta Department of Agriculture operates 3 modern Agricultural and Vocational residential Colleges. These are at Olds, (S.W.), at Vermilion (East Central), and at Fairview (N.E.).

The three colleges offer 4 diploma courses in Agriculture and Vermilion offers a diploma course in Home Economics. To an increasing degree emphasis has been shifted to updating and retraining, also on the preparation of people for employment in Service occupation as well as for primary production in Agriculture.

The Colleges accept students with a wide range of abilities and educational levels. Long range planning and constant evaluation permit great flexibility of programs and adaptation. Thus the colleges provide transfer capabilities to other post secondary institutions and to

University. They provide opportunities for training, retraining, and updating on academic subjects as well on applied sciences related to Agriculture, home making, and service industries. As technology changes and new needs develop in the horizon, the agricultural and vocational colleges develop and introduce new training in full cooperation with the branches of Agricultural industry they aim to serve. Provision is also made for transfer capabilities to other post secondary institutions and to University.

The ultimate role of the Colleges is to serve as Community Colleges to meet the Post-Secondary Agricultural and Vocational training needs of the Community. Continuing educational courses are being offered in a variety of subjects of special interest to the people served by the Colleges.

District Extension offices of the Alberta Department of Agriculture are provided with the latest college calendar. More specific information on programs available, can be had by writing directly to the Principal of one of the colleges.

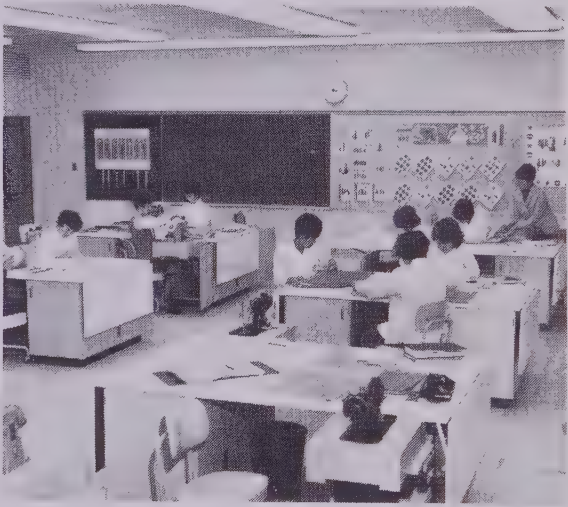
Informal Education For Rural People

(RURAL EXTENSION)

The objective is twofold: 1. assist those who have never been exposed to adequate training. 2. up-date and/or retrain.

Very many of the present middle age and older rural people have never had a chance to go very far in their schooling. Again, a substantial percentage of farm youth never finish high school and still greater percentage never attended an agricultural college or university. Coupled with this is the fact that knowledge accumulated in one's youth does not last a lifetime and adults must continue to learn, because of the tremendous changes that keep taking place in situation, in technology and in philosophies.

Many organizations have a hand at adult education in Alberta's rural areas. By far the most widespread is the Extension Division of the Alberta Department of Agriculture (see page 20). This was set up by statute in 1938 to coordinate the Extension program of every Branch of the Department and in so far as possible, to cooperate with all other Extension agencies for ultimate greater efficiency. Scope includes agriculture, family living, and community development. Education is informal, at all levels and degrees of intensity, and by whatever group or media found most appropriate. Main teachers are District Agriculturists and District Home Economists, who operate from a network of 55 District Extension offices. These, in turn, are actively supported by their respective Regional Agriculturist, as well as by specialists, both Regional and Edmonton based. A great deal of assistance is received by District Extension personnel, whenever solicited, from the Federal Agricultural Research Centres, from the Faculty of Agriculture at the University, from the Agricultural and Vocational Colleges, from farm organizations, agribusiness and many others. Most of these however do have agricultural extension activities of their own and exert a considerable impact on the education and guidance of rural people.



Sewing Class

Most effective educational steps of District Extension staffs and those assisting are the "on the farm call", and the office interview. Basic instruction and the creation of awareness is done by depth courses, demonstrations, workshops, press releases, radio talks and the distribution of relevant publications. All of this is supported from Edmonton Headquarters by radio talks on several networks, the release of films and film strips and timely TV programs.

Since the object of all agricultural Extension work is to create orderly necessary change to keep in step with ever changing conditions, great emphasis is placed on the formulation of fully coordinated county based programs for agricultural development. Stressed are county agricultural advisory committees fully representative of all major groups interested in orderly rural development, and action programs, in which all interested share and are given due credit.

Rural Health

Preventive health services are provided in rural areas under the Health Unit Act which provides for the organization and administration of health units. The health unit is established by agreement between one or more municipalities including towns and villages. A considerable proportion of the total costs is paid by government grants according to a formula based on a per capita basis, the size of the health unit, and the dispersal of population. The program of a rural health unit includes measures to improve the health of school children including examination and immunization; health education; immunization against smallpox, diphtheria, whooping cough, tetanus, poliomyelitis and measles; child hygiene clinics; prevention and control of communicable diseases; supervision of water, food and milk supplies; sewage disposal and general sanitation. There are now twenty-four rural health units and the Northern Alberta Health Service which provides health services to all of the province, with the exception of the Federal reserves.

A Municipal Hospital

Municipal nursing services are provided in communities which may be located at considerable distances from hospitals and medical services. Municipal nurses offer first aid and emergency treatments as well as preventive health services, including prenatal and postnatal maternity care; child health services; immunization programs and other methods for the control of communicable diseases; mental health services, nutrition and health education. As the settlement of the province increases, the need for municipal nursing services is decreasing and the number of municipal nurses is now 16.

The Alberta Hospitalization Plan provides hospital benefits for all residents of the province and these benefits include bed accommodation at a standard ward level, meals, necessary nursing service, laboratory, radiology and other diagnostic procedures, drugs and biological preparations when administered in a hospital, use of the operating room, case room, and anaesthetic facilities, including necessary equipment and supplies; and routine surgical supplies and radiotherapy and physiotherapy services when available. Chronic hospitalization is included upon admission to hospital by a physician. At January 1, 1970, there were 11,000 acute treatment beds available in 118 hospitals; for patients requiring longer hospital care there are 2,357 beds available in 28 auxiliary hospitals; for prolonged and indefinite nursing care there are 4,777 beds in fifty-nine nursing homes with an additional eight under construction.

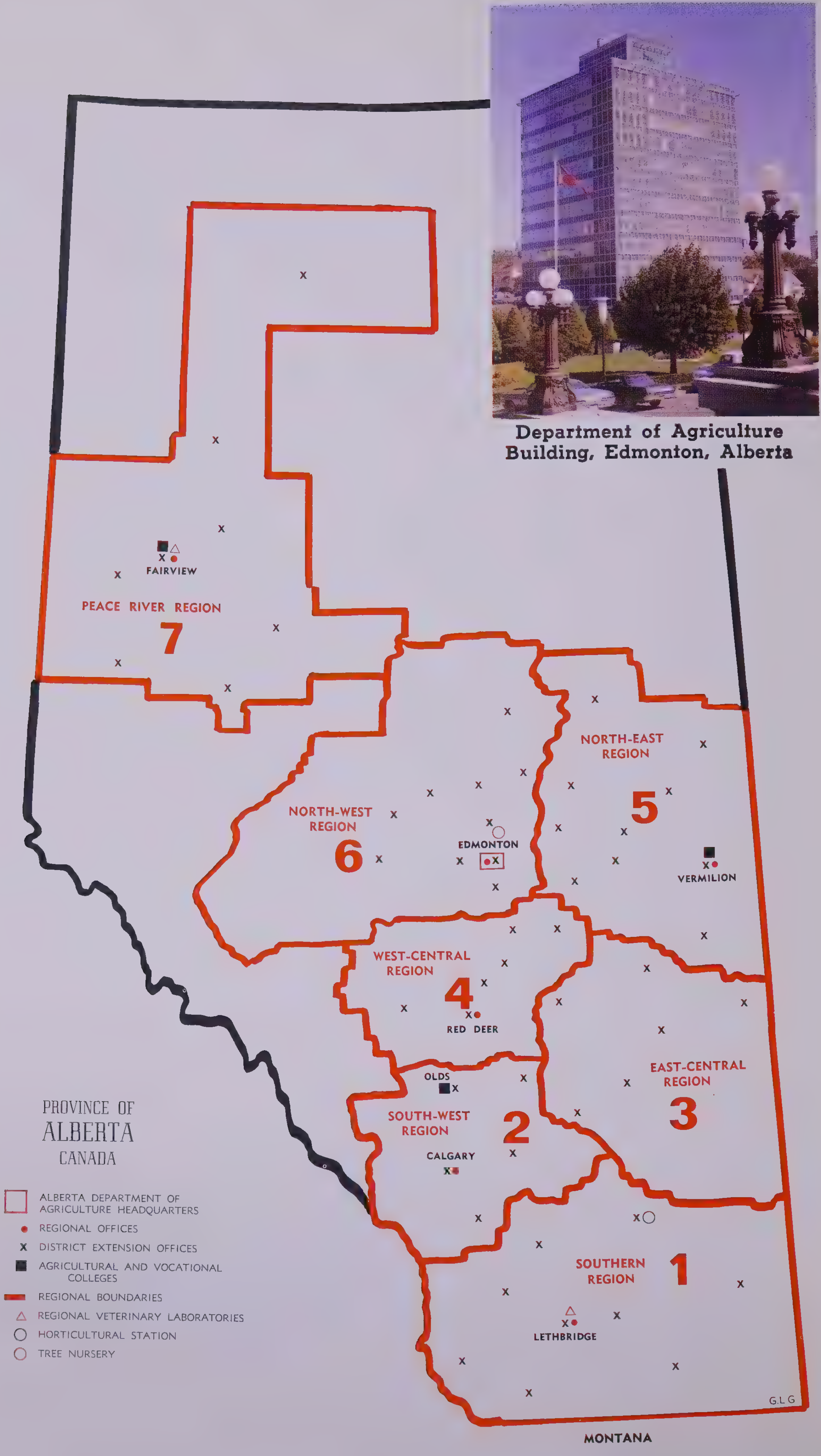
Medical services provide programs for nursing aide education, x-ray and laboratory technicians, health careers recruitment, emergency health services, handicapped children, special drug programs for cystic fibrosis, diabetes, phenylketonuria and rheumatic fever; emergency air ambulance service, poliomyelitis treatment, dental and optical services for Social Service recipients, cerebral palsy clinic, poison control services, civil service nursing service and the Northern Alberta Health Service. Other health services provided by the Alberta Department of Health include programs for preventive dental care, social hygeine, blood transfusions; tuberculosis, industrial hygiene, cancer diagnostic hospitals and treatment clinics, mental health epidemiology, alcoholism, environmental health services including public health engineering, and the Provincial Laboratory.

ORGANIZATION OF THE ALBERTA DEPT. OF AGRICULTURE

MINISTER
DEPUTY MINISTER
EXECUTIVE COMMITTEE

MINISTERIAL ASSISTANT
EXECUTIVE SECRETARY
PERSONNEL
ACCOUNTING

Plant Industry Division	**Animal Industry Division**	**Program Development Division**	**Extension & Colleges Division**	**Water Resources Division**	**Agricultural Economics Division**	**Veterinary Services Division**
Crop Protection	Livestock	Marketing Council	Dist. Agric.	Internal Administration	Farm Purchase Board	Field Services
Pests	Dairy	Land Utilization	Home Economics	External Administration	Farm Management	Fur Farmers
Field Crops	Poultry	Irrigation	Agr. and Voc. Colleges	Regional Administration	Marketing	Lab. Services
Horticulture		Municipal Programs	Information	Law Devel.	Resources	
Soils			Engineering	Materials	Economics	
Weeds				Construction	Research	
				Geology	Systems & Designs	
				Agrohydrology		
				Hydrology		



Department of Agriculture Building, Edmonton, Alberta

Acknowledgement

This pamphlet updates publication No. 40 which was titled "Farming in Alberta" and was much in demand. The general organization of the material is somewhat the same but almost every section has been rewritten to meet a substantial reduction in size of the publication and to update it. So many have contributed to this and to past editions that it is not possible to select anyone for individual mention. To all who assisted in one form or another, thank you. Anyone desiring further information on Agriculture in Alberta is invited to send his request to, "Information Branch, Extension and Colleges Division, Agriculture Building, Edmonton 6, Alberta".

GEO. L. GODEL, Editor of the revised publication.
Extension & Colleges Division.

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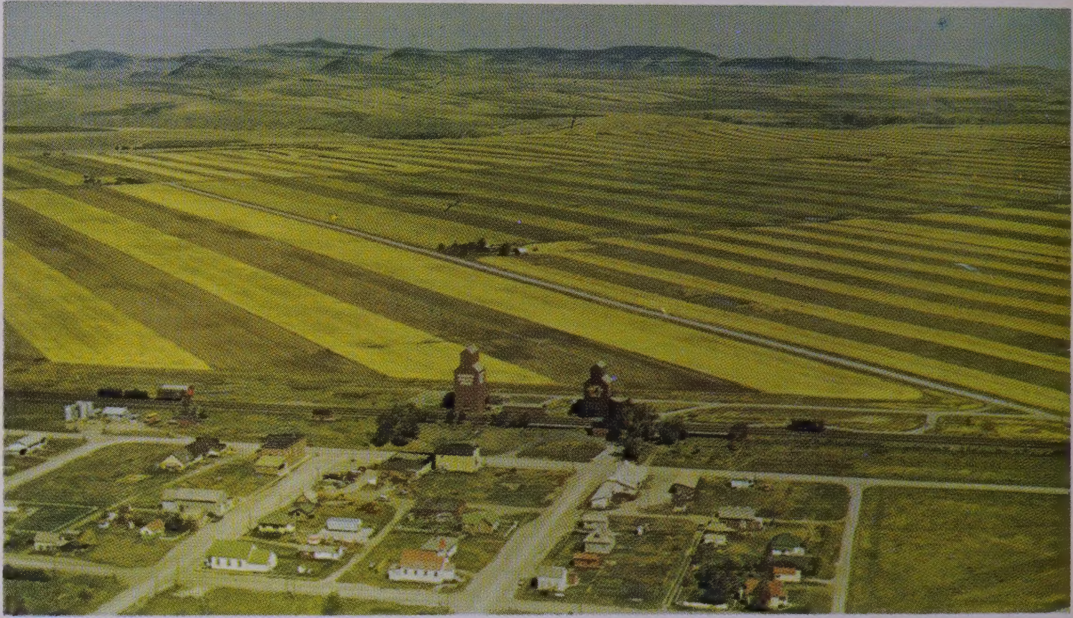

stripfarming

dairy cattle